

CLEVELAND AREA 99-4A USERS GROUPS NEWSLETTER

OCTOBER, 1986

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BULLETIN BOARD	----- (24 HOURS) (216) (944-1072)			

Now that we are all back from vacation, have ALMOST put our golf clubs, fishing poles, garden tools, etc. away, how about devoting some good time to the TI. We appreciate very much the response to the recent requests for help.

We continue to see our names in other newsletters around the country. Even small tips such as those submitted by Les Kees and Ken Gladyszewski. Larry Prickokis wrote an article over 2 years ago about transferring files between 2 TI's via the RS232 with OLD and SAVE, and this was repeated only last month by one of the clubs. So you never know where your name will appear. This past month, Dave Talan, myself and Ken Gladyszewski were featured around the country. This is a challenge to each of you also. With the many programs we have in our library, surely there are those you like or don't like and you have reasons for same. Jot them down and we will print them. Think what you enjoy best about your TI, then get involved with that area. Don't wait for someone to ask you. We are informal groups who don't know all the members that well, and it is up to you to speak up if you think there is a job you can do as well as someone else is doing it. Elections will be coming up shortly in all of the clubs and it would be nice not to have to BEG people to help keep the club going.

The above comments were written BEFORE I received Jan Fedor's notes for Chips and Steve Weinkamer's for Solon. This is the year we are going to have to decide whether we want to continue further the use and support of the TI99/4A. Too few people in each club are doing too many things. If one of them is transferred, becomes ill, or leaves for personal reasons, there is a huge gap which is difficult to fill. If a lot of people were doing a few things, then that would be a much smaller gap to fill. Make a list of what you think you can do and what you would like to see done and then try to see where you can fit. Marty Smoley suggested at the Northeast meeting that people first just come to observe and then as they get more comfortable with that area, start to participate. The next few months are going to be very critical for some of our clubs. Let's not throw in the towel now. We have more accessories and more software available for our little machine now than ever

before.

I got lots of comments on the 18-pager we put out with many saying they would like to see our newsletter that size EVERY month. I know 4 people at least who are very happy with our 10 or 12-pager (depending on the info available)...They are myself, Tom Nellis, Bruce Young and Frank Jenkins. I was about typed out after that one. And if you have ever had to prepare bulk mailings, you can understand what Bruce and Tom do each month. I have been doing a newsletter for my church the past 2 months and have come to appreciate the unheralded contributions of these two very much. Frank sees that the newsletter is printed and ready for Tom and Bruce and he had to lug around all those copies from downtown. Frank also maintains the mailing list and prepares the mailing labels for ALL of the clubs. Just so you know your newsletter doesn't just magically appear on your doorstep each month.

ATTENTION OTHER NEWSLETTER EDITORS: Some of the newsletters on our exchange were still going to the Solon Group's P.O. Box. This box has been closed and if you are still using that address, your newsletter to us is now going to never, never land. Please double check and send all correspondence to the P.O. Box on the back of this newsletter.

The Fourth Annual (and original) TI FAIRE is coming November 1 at Triton College, River Grove, Ill. Several went from our club last year, including the Thalmers, Ken Gladyszewski and Marty Smoley. It's not that far, if a group would like to get together and share expenses.

Look inside for...A way to get some more mileage out of your old keyboard; another This N That miscellaneous; a library update; learn to use strings by Tom Nellis; a review of PRBASE 2.0; a review of creative filing system; ways to cool your PEB box by Jim Mekeel; a program which allows you to run programs written in basic that are currently unrunnable in extended basic to run in extended basic; what is Super Extended Basic? by Dave Talan; get your money refunded from Home Computer Magazine; Slow down fast DM1000; some tips for caring for your Disks and disk drives, and just enough room left for a HA HA.

SOLO EXECUTIVE NOTES

For those of you who may have missed the last meeting, Bruce Young demonstrated a mail list and file keeping system program that he expanded upon to meet his own needs. The program presents a number of ideas and possibilities for anyone interested in customizing a program for his own use. Thanks to Bruce for the imaginative presentation. Next month, Frank Jenkins will show us the P.R. Base program, released as fairware. This has been said to be one of the best data base programs available for the T.I.

Once again, our turnout at the last meeting was disappointingly small. Without being specific at this point in time, a number of ideas were shared as to how to approach this now usual situation. As the next few months pass, several decisions will be made as to the direction our group must take for the future. It was decided that your president will extend his tenure an extra month into February of 1987, so that certain decisions can be more easily made.

This month I would like to reprint a letter that we recently mailed to a number of non-active members of the group that still have paid memberships with the group. Even though it is addressed to the Solon members, everyone reading this newsletter can probably get something out of the letter's information.

Dear Solon T.I. 99/4A User's Group Member,

In the last several months we've missed some familiar faces at our meetings. During the spring and summer months we know how hard it is to find the time or willingness to sit at our computers on a nice evening or weekend afternoon. If you have been away from your 99/4A for a while, you may not be aware of some of the things that have been happening over the last several months or so. With that in mind, we would like to relate some of the more exciting changes that have taken place in the TI world.

First of all, many of the prices of TI related products have dropped drastically this past year. Many of the modules and related software can now be had for a fraction of their original cost. For instance, the Editor Assembler or LOGO modules can be purchased for \$19.95; Extended Basic is now selling for \$49.95 and Multiplan for \$38.95; most game and education cartridges now sell for less than \$10.00. And perhaps best of all, TI WRITER and many other great programs can be gotten under the freeware concept for ANY AMOUNT YOU FEEL LIKE PAYING, up to \$10.00! (More about freeware later).

Languages such as FORTH, C, and PILOT, are also available in the public domain for free, and can be run out of Extended Basic.

Although some of these programs require memory expansion and disk drives, the cost of these items have been lowered also. There is even a printer available that requires no expansion system or special interface for less than \$100.00. A 512k memory card is now available for added memory space, and for less than \$200.00 there are several products on the market that allow the user to transfer the contents of any module to disk and make modifications to the program if desired. There are also RAM disks, print spoolers, clock cards, double density disk controllers, and stand alone RS232's.

New, high quality, software is being released also. Great graphics packages such as GRAPHX, BITMAC, JOY PAINT and TI ARTIST let you become an artist with your 99/4A. There is even a home security system that can be connected to your computer. Or how about a flight simulator game module? The list just goes on and on!

I mentioned "freeware". This is a concept whereby authors of quality programs provide their software to the user at little or no initial cost. The user then decides what the program is worth to him and sends the author that amount. The author usually puts a maximum suggested value on the program; \$10.00 in most cases. We have most of the freeware programs available in our library for the asking, and we are constantly getting more as they are being released. In fact, our library can boast of being one of the most complete TI libraries anywhere with over 1200 programs and growing!

The bottom line is that the 99/4A is far from dead! In fact, there is more activity in the TI community now than ever before. Please, attend a meeting of the Solon User's Group in the near future and see what we've been talking about.

We valued your past support and presence and are looking forward to renewing our friendship. We are looking forward to having you back with us at Solon Public Library, on the second Saturday of each month.

On behalf of the user's group,

Steve Weinkamer

See all of you on October 11!

ASSEMBLY LANGUAGE CLASSES

This month's class will be held at my house, Sat. Oct. 11TH at 7:30 PM. We will cover the second installment of Mac McCormick's tape and discuss multiple work space registers.

Now for the bad news. Due to other commitments on my part I will no longer be able to hold the meetings at my house. I hope someone will come forward and assume the responsibilities of coordinating this SIG. It not as hard as you think.

2. T.I.N.

EXECUTIVE NOTES - TI-CHIPS

By Jan Fedor

There was a good turnout at the September meeting. They in turn viewed a fine schedule of presentations. Dan Keller demonstrated the Monopoly game. This disk was raffled, courtesy of Edu-Comp.

Terry Vacha demonstrated the MAX/RLE program and some of the available pictures. This program shows pictures with incredible detail. It can load, save and print. Pictures can be changed using Graphx or TI Artist.

Ed Kennelly demonstrated the library disk, T-Cat (tiny catalog, tiny calendar). It does exactly what its name says - produces tiny lists and tiny calendars.

A big thanks to Dan, Terry and Ed for the fine programs. Our group is looking for new people to serve on the Education Committee to replace those who have moved away. We would also like to give our thanks to the Thainers for bringing their equipment and making their software

available to the club.

Jan Douzal, Membership Chairman, has had to resign her position, since she moved to Pittsburgh for a job transfer. Dan Keller will assume her duties temporarily. Please call one of the officers if you are interested in filling this position. We are also looking for someone to write for the newsletter.

John Parken has made a joystick tester and brought it to the meeting. He has a schematic if anyone is interested in making one of their own.

Now that summer is over, we hope to see everyone at the next meeting. Tom and Judy Thainer will demonstrate a disk to program and control your home electrical system. Someone will speak on Basic programming, and we will take apart a PE box to show how to change the fan and replace it with a quiet fan.

See you all on October 18 at 10:00 am at the North Royalton Public Library.

EXECUTIVE NOTES - NORTHCOAST

Thanks to all who attended the September NorthCoast meeting. With summer over, let's gear up and get some use out of our TI's and get involved with the club.

There are several people who have had to pass their jobs on to others and it would be great to have volunteers fill in. As you have noticed, we have not had a secretary all summer and there were NO volunteers to fill in.

Now, Paul Wheeler will not be able to carry out his duties as program chairman for a few months. Marty Smoley has offered to help out. But, since Marty is already vice president, active in the newsletter group, etc., it would be nice if we could get some more people involved. At least let Marty know what kinds of programs you would like to see presented and volunteer to do one yourself, if possible.

Larry Prickokis will not be able to continue as remote

sysop for the bulletin board. Tom Nellis has been asked to take over this position. But, by doing so, Tom feels he will not be able to keep running the Assembly S16. I wonder why....Tom is ONLY involved with writing for the newsletter, allowing the newsletter editors to meet at his house, with Bruce Young, doing the stapling, addressing and mailing of the newsletters, writing for the Youngstown newsletter. Surely, someone could volunteer to host the Assembly S16 group and keep it alive.

Tom Nellis demonstrated the many facets of FUNLWRITER. Anticipating that members might like to have copies, several were prepared ahead and sold for \$1 apiece or traded for blank diskettes. This was so successful that it may be repeated in the future with popular FREEMARE or public domain items from the library.

Don and Joe Zupko will demonstrate Musicmaker from Norton Software at the October meeting.

MORE ABOUT KEYBOARDS

Excerpted from Joe Muvolini's "Odds and Ends", Front Ranger, September, 1986.

We have several different kinds of keyboards for the TI99/4A. The one I had a problem with was a HI-Tek. If you pop the top of a key off one of these keyboards, you will see 2 little gold fingers inside a white square. These fingers are what cause the problems. They get out of adjustment. You can try CAREFULLY to bend them slightly closer, but be careful not to twist them or they will not meet evenly. This may cure the problem. However, much to my surprise, you can replace these fingers with new ones. Your local computer repair person should be able to do this.

Ed loaned me the little special tool and a couple of new fingers, and I installed new ones. There are at least two other types of keyboards. One, made by Mitsumi and sold by Radio Shack (Part #1277-1023), appears to be a throw-away type. According to Kevin Kopus, who had one apart, it appeared to be unrepairable. I suspect you use this one until it fails and then replace it. The third kind I have seen is also repairable. According to Ed this is the most reliable. Each key is a self-contained unit and when you take the top of a key off of this kind, you see a small horizontally shaped shaft that goes into a sealed unit. This individual key unit can be replaced. Since it is a sealed unit, the chances of dirt getting into the mechanism is greatly reduced, thus making the keyboard very reliable.

THIS N THAT

Found a couple of good buys...one on diskettes and the other on ribbons for the Gemini 10X and S510's. NEI Electronics, 1555 West Lane Ave., Columbus, OH 43221, Phone 614-481-4417 has diskettes in lots of 100 for 29 cents each, plus \$4 shipping for the first 100 and \$3 for each 100 afterwards. Marty Sooley and I have both ordered and received ours and they seem fine. This offer is good until October 15. On September 19, I ordered a dozen ribbons at \$1.05 each, plus \$2.00 shipping per dozen. This is from Midwestern Diskette Distribution Center, 1301 Clayton Road, Creston, IA 50801, phone 1-800-221-6332. The ribbon they have listed is the Okidata ML82 which is the same style ribbon we use on the Gemini's. When talking with the person who took my order, they charge for credit cards, but if you leave your number with them and then send a personal check, they will not use the credit card and will not hold your check for the 15 days clearing some places do and will send your order immediately. I received my order by UPS on September 24. Both of these buys came from the September Computer Shopper. Believe me, it doesn't take long to pay for your subscription to this magazine by taking advantage of their ads.

Read in Byte Magazine where the price on 1200-baud modems will soon level off at about \$100, since they have reduced the number of chips necessary to manufacture them. You can already see these prices in Computer Shopper, and I noticed a 2400-baud at the \$350+ mark that used to be customary for the 1200-baud.

I noticed in one of our exchange newsletters that Clint Pulley was to have an updated version of c99 available in July or August. Did ANYONE pay their dues on this one so that they received a post card notification. This is how you keep up on enhancements to fairware. If you pay, you are notified and can send for it usually for only the cost of the postage and mailer. It's up to you guys on this one. I got PRBASE 2.0 for you.

I saw in a newsletter where there is a program (with examples) that will take any extended basic screen and convert it to TI ARTIST format. It doesn't say if it is commercial, public domain, or freeware. I will write and find out.

I received a call last month from Wes Richardson, Vice President of the Lexington, KY, group. Wes' wife's family lives in Solon and they visit here quite often. I was able to put him in touch with Steve Weinkamer, and we are now in the process of trading programs with this group. They have a lot of FORTH and I received in today's mail (September 22), 10 disks of FORTH with only 2 being duplicates of what we already have. I have sent back some freeware they requested, and we will probably have continuing exchange with this group. Hope that they next time they visit, they will be able to time it with one of the meetings of one of

our groups.

It wouldn't hurt to check this one out. From the MADHUS (Minnesota & North Dakota Group) is a 2-liner about disk drives for \$8.00!!!. That is not a typo...I said \$8.00. They are available from Softies in Minneapolis, 8179 Medicine Lake Road, Phone 593-9857. They are single sided half heights that have been taken out of new systems made by Teak. (The article did say "Teak", but I think they probably mean "Teac".)

There are some utility programs coming for the Gran Kracker. REDISKIT is a Dis/Fix 80 program written by James Schroeder of Milwaukee. You load the program using E/A \$3, ten press C and instructions appear. You turn on GRAMS 1,2,3, enable bank \$1, then turn off the loader. You put your master disk in Drive \$1 and the copy disk in \$2. It will format the copy disk and copy 1440 sectors in 1 minute, 25 seconds. (This came from the Mid-America 99 Users Group, Merriam, KS. There was no address for Mr. Schroeder, but I think it may be FREEMARE.) Another Gran Kracker program mentioned lets you create a Dis-Var 80 file of the programs you have stored in K5 and then scroll through them and select the one you want.

Does anyone out there like to type in programs. There are a lot of good programs in newsletters, mostly utilities. I have been doing my best to do this, but have gotten behind. Typing in programs has helped me gain what little program knowledge I have more than anything else I have done. Give me a call if you are interested and I will pass those newsletters on to you directly.

If you don't recognize the names Jack Kilby or Robert Noyce, but do relate to Texas Instruments or Intel, you should read a book entitled "The Chip" by T. R. Reid. These two men invented the microchip independently several thousand miles apart within months of each other. This is their stories, the 10-year patent battles and other information. The book is only a little over 200 pages and quite informative.

From the April/May issue of News Net 99er..AT&T has a compact flat (tone or pulse) phone that is color coordinated with the black and silver console. Panasonic has one for the beige Console. Also, MASTER PIECE is a swivel you set under your monitor. It will swivel right or left about 40 degrees. Five outlet plugs in the back with separate switches in the front, plus a master switch. Real protection from power surges, spikes and line noise. Static protection, it has a grounded nameplate strip across the front. You can hardly touch a switch without touching the grounding strip.

Some more items picked up at the newsletter editors' meeting. You never know when you possess information which interests others. I have been spraying my fabric ribbons with WD40 for about a year now to rejuvenate them. Others had never heard of such a thing. Mary Sooley has built (beyond my abilities to describe) a home-made rainter for

his wide-carriage Epson cartridge using a stamp pad and stamp pad ink. I just about double the life of my ribbons with this little spray job.

The ELECTRONICS SURPLUS store downtown on Prospect will be having a WAREHOUSE sale in the flats on October 8, 9, 10, and 11. Hope this reaches you in time. Call them at 621-1052 for directions. Understand you can really get good buys and fulfil your wildest electronic dreams at this sale.

Micro Center in Columbus, OH also has diskettes for 29 cents apiece. Bruce Young got 2500 sheets of micro-perf paper for \$18.95, 100 diskettes for \$29.00 and only \$3.95 shipping on the whole order. They also have 5000 labels for

\$11.95. Phone 1-800-523,4438.

Mark McCauley reminded us that TRITON has Extended Basic for \$29.00. There is a menu loader program in the library for programs on tape. It will search the tape and load it for you. There are about 500 educational programs in our library and this would be a very low-cost method of using your TI for your children even if you don't have disk drives, etc. Let your friends know who still have theirs sitting in the closet. This say bring it out.

DEANNA

Howe
Winkler 8K cart 251-2967

LIBRARY UPDATE

Just because you haven't seen anything about new programs in the library, doesn't mean there hasn't been anything going on this summer. At this time there are 6 utility, 6 music/graphic, 2 home/financial, 2 extended basic games and 1 education disk out for cataloging.

The middle of September, I added the following FREEMARE items: We updated DM99 to V.1.1. V.2.0 was to have been released in August which eliminates the need for "CALL LINK" to call in the routines. PRBASE 2.0 is in and V. 3.5 of Mass Transfer. Version 3.3 of FunWriter

Three more games were added to the disk of assembly games...BUZZARD, A munch-man type game, DECODR to code and decode sayings, phrases, etc., and GRAYELF to be used with the Adventure module.

A track copier for the CORCOMP card.

RHJ MAILING LIST which holds up to 900 names and addresses.

SN/LABELS - Prints labels 3 across.

COMBINE - An archiver program. AA2

DCOPY - Combines programs into one file, but does not compress them as some archiving programs do. AA2

DISK UTILITIES - A set of disk utilities to compare disks, print sectors, sector editor, etc., etc. AA2

DRAWFORTH - A drawing program in NYCOVE FORTH. The directions for use need the speech synthesizer. AA2

SECTOR - Buffers 90 sectors and transfers them to the RS232. Use to transfer FORTH. AA2

MYTERM - A terminal emulator with automatic dial provisions written in NYCOVE FORTH. AA2

A set of utilities for printing disk labels and disk jackets. Also includes tutorials on using cassettes and cassette files. BB2

99/CALC - A spreadsheet program. In Extended Basic. Adequate but slow. CC2

CALENDAR - Prints a variety of calendars including for monthly appointments, yearly, but, small, etc. CC2

SUPER MAIL LIST - A mail list in assembly which holds up to 190 names, addresses and phone numbers. DD2

CREATIVE FILING SYSTEM - A database manager reviewed elsewhere in this newsletter. EE2 FF2

Dave
Talan 333-5829

MUSIC PREPROCESSOR - A music utility program in E/A as a subroutine to be called from an Extended Basic Program. You can code directly from commercial sheet music. GG2 HH2

RAG (OR MACRO) ASSEMBLER. Reviewed in the July, 1986 issue of MICROpendium. There may be some bugs if you picked this up at the August meeting and before the September meeting. There has been an update and Mr. Green sent via a round robin method a new copy to all who had ordered. This is real class to send updates to people who have not paid. So if you use this one, PAY! II2 JJ2

CATALOG COMMENTS DISK ENVELOPE DESIGNER. Print a disk envelope with comments. From Trio+ Software. KK2

Three disks of RLE graphics. LL2 MM2 NN2

TIBBS - The bulletin board program.

Those of you who are still using cassettes, please remember that most of the programs, especially games and educational ones, will run on tape. In fact, I have 22 tapes of programs I accumulated before getting my disk drive. I will be more than happy to copy any off for the Northcoast people who might want some, and I am sure the librarians for the other groups will do the same for their people. We want to make it as easy as possible for you to continue to use your machines.

At this time, it looks as though I will be unable to continue as librarian after the end of the year. The job has been made easier by the people who volunteered to catalog individually the various categories. This has been and is a fun job. I have 4 or 5 contacts around the country, plus the people I write to for firmware. The amount of programs which come in seem to come in spurts, so you would not be super busy all of the time. I would hope that when elections come around in a couple of months, there will be someone who will volunteer to be librarian for all 4 groups so that we can continue working together. I am doing some work that will require I purchase an IBM compatible machine which simply won't leave enough time available in my life for the newsletter, library, job and another computer. This newsletter is full of calls for help and your nitch should fit in one of them.

DEANNA

BASIC BASICS
WHAT'S IN A STRING?
By Tom Nellis, Northcoast 99ers

How many times have you seen a statement similar to this.

```
10 A$=" THIS IS A TEST"
```

The value of A\$ is now equal to whatever is in between the quotes. A\$ will remain unchanged unless the program or user of the program alters its value.

The version of Basic II has provided with the 99/4A console has 8 commands that allow you to manipulate strings in a variety of ways. These commands are ASC, CHR\$, LEN, POS, RPT\$, SEG\$, STR\$, and VAL. Some other versions of Basic offer a few more commands, but these 8 will do the job nicely.

The first four commands that we will examine are ASC, LEN, POS and VAL. What you should notice about these four commands is that they perform some type of function and return a numeric value. This is the reason there are no "\$" trailing these commands.

A simple review of these commands follows:

ASC Returns the ASCII character code for the first character in the string.

```
A$="THIS IS A TEST"
```

```
A=ASC(A$)
```

"A" will now equal 84. The ASCII value of the letter "T". "T" is the first character in the string A\$.

LEN Returns the total number of characters in the string.

```
A$="THIS IS A TEST"
```

```
A=LEN(A$)
```

"A" will now equal 14. The total number of characters in the string "A\$".

POS Returns the position of the string you are looking for.

```
A$="THIS IS A TEST"
```

```
A=POS(A$,"IS",1)
```

"A" will equal 3. This number is the starting place of the first occurrence of "IS".

```
A=POS(A$,"IS",4)
```

"A" will now be equal to 6. The number 4 in the above example indicates the starting position in the string where the computer will be looking for "IS".

VAL This is used to convert a string value to a numeric value.

```
A$="12345"
```

```
A=VAL(A$)
```

"A" is now equal to 12345. You can now perform calculations on "A".

The next four commands return a string value. This is the reason for the "\$".

CHR\$ This is used to convert a number to an ASCII character.

```
X=65
```

```
B$=CHR$(X)
```

```
PRINT B$
```

B\$ now equals "A". The ASCII value of the letter "A" is 65.

RPT\$ This command must have a use but I haven't had to use it yet.

```
B$="TESTING "
```

```
C$=RPT$(B$,3)
```

```
PRINT C$
```

"TESTING TESTING TESTING " should be the answer. The number 3 indicates how many repetitions of the B\$ you would like.

SEG\$ This command is used to dissect a string. You specify the string "A\$", the position in the string you want to start at "6" and how many characters you want "2".

```
A$="THIS IS A TEST"
```

```
B$=SEG$(A$,6,2)
```

```
PRINT B$
```

"IS" is the answer. The word "IS" starts in the 6th position and is 2 characters long.

STR\$ This command is the opposite of the VAL command. It will convert a numeric constant or variable to a string value.

```
X=65
```

```
A$=STR$(X)
```

```
PRINT A$
```

"65" is the answer. You cannot perform any type of arithmetic on it.

I hope that I have shed a little light on these commands when it comes to using functions. In the next article I will show you how these commands are used in a program.

PRBASE VERSION 2.0

The following is a review of PRBASE 2.0 by Joe Nuvoletti of the Front Ranger, August 86. I have interspersed comments about problems I encountered in using this program on a TEST basis with Creative Filing System. My comments will be enclosed with (). Deanna Sheridan, NorthCoast 99ers

Version 2.0 of William Warren's PRBASE supports double sided operations and will hold 710 records. The major changes are in the CREATE portion of the program. In my original review, I was critical of this portion, but Bill has made the use of it much simpler. Upon selection of this area, you encounter a menu with eight elections.

Option 1 is Select Data Drive. With this option you can make drives 1-3 your data drive. Option 2 allows you to format a data disk as either single or double sided. (This option allows for CorCorp or TI Disk Controller. Each time I would try to initialize a double-sided diskette, it would verify to the 358 mark and then stop with an error message. After several attempts and several different diskettes used, I left the program, initialized the diskette with the TI Disk Manager, went back to PRBASE and had it initialize again and it worked. Your data disk MUST be initialized by the PRBASE program in order for PRBASE to read it.)

Option 3 is the Design Data Screen. When done, you can print out the data screen to help design labels and reports. (This is necessary if you have a lot of data fields to remember). At the end of this option, you input the data disk name and your output device, for me PIO/1. (I had not read this review before using PRBASE and it would have saved me about 24 hours of frustration. It would not accept just "PIO", or "PIO.LF" and "PIO.CR" printed everything on top of the other. Finally I resorted to the RS232 manual and tried "PIO.EC" which also worked for my Gemini 8010. There was no hint of this nonstandard way of opening the printer file in the instructions).

The next option is design Tabular Reports. You can design 5 reports which can be REDONE if not satisfactory. After you select the report number, you can select 80 or 132-column formats, the number of lines in the report, and the report title. Next, you enter in ASCII the control codes you want, up to 6. I used 15 27 78 10 to get condensed print and sip over perf. After the control codes, you reach a screen titled Report Format screen. At the bottom you enter the Log Device, again PIO/1 for me, and can print this screen if you wish. The next screen, titled Design Tabular Report is where you actually design the report. The first 16 fields are automatically here, and you must move them around, delete some and add others. You must enter the screen location, number of characters, report line, and column position for each item in the report. (This is where you use the printout of your data screen to find out the position of your columns and the number of characters they use. I found this section very involved and difficult to understand.) When finished with the layout, you press-FCFN 6, PROCEED, and the data fields are initialized. The next screen is titled Enter Column Header. It shows the starting position of each field in the report with a claret [] so you know where to place your headings. When finished labeling, press enter and the report format is saved on the data disk. To change it, go through the process again and make the desired changes. NOTE the heading titles must also

be changed or the clarets will reappear with the letter that belongs there. (This makes a nice-looking report except for the page title. Also, it does not reprint the column headings at the top of a new page. It is a shame that after so much work, you do not have a truly professional-looking report. Perhaps that will come in 3.0).

Number 5 allows you to design mailing labels. It is quite similar to the report design option, but shorter. Here you choose the number of lines and set the locations for the data. Then the data fields are initialized and the format is saved. Again, you can return and change it if you like. (I did not test this area and have no comments)

Option 6 is used to set printer control codes. You can set five sets of control codes up to six ASCII characters long. You select a number between 1 and 5, enter the text for the code, e.g., condensed print, and then enter the code, for me 15. You then have the option of saving it to disk. These are accessed through the C command in the data management part of the program.

Option 7 is Setup Options. Here you can set the data disk name, printer name, single or double-sided disk, and set the left and right tabs for 2-across labels. A zero for the right tab will print single labels. The same caution about entering your printer name applies here that was mentioned in Option 3.

Finally, option 8 is exit.

There are only a few changes on the management side. The first is that if you can't remember the name of your data disk, you can enter BSKx?, x being the drive your data disk is in, and it will read the data regardless of the diskname. (After initializing your disk with PRBASE, you cannot read it or catalog it from Disk Manager, so there is no way of finding out the name if you forgot it.) If you enter N from the menu for record number, the highest record number will appear as a default value. When Editing you no longer have to keep pressing enter to get the cursor through the entire screen. When you are done editing, just enter FCFN 6, PROCEED, and the edited record will be saved to disk.

There is a selective search, which you reach by entering Y at the prompt in the Options area. Here you can index by name, for example, and a string in another field, let's say 80917 under a zip code field. After indexing and sorting, you can print out alphabetically all names with zip code 80917. (This is a great feature and you can make subreports to your hearts content).

There is a set of PRBASE UTILITIES written by John A. Johnson. They contain a menu with the following options: Copy Database Header (sectors 1-9), Copy a Group of Records, Copy a Single Record, Search and Select Records, Sort and Rewrite to Copy, Configure Drives, and Exit Program. Most are self-explanatory and are covered in the DOCS that come with the program. These utilities and DOCS are now included on the PRBASE disk.

Bill has really outdone himself this time. I would have to upgrade my report card mark for ease of operation to an A and final grade to A+. (I would not disagree with this AFTER you learn how to use it. However, either I am very dumb or the DOCS were not as explicit as they could be since it took me several hours to get a simple database set up with a sample report printed. Now I can zip through one, but the learning time was frustrating. This is in the Club's library or write to Bill Warren, 2373 Ironton St., Aurora, CO 80010.)

CREATIVE FILING SYSTEM
By Deanna Sheridan - NorthCoast 99ers

Most of us have read reviews or heard of PRBASE as the best freeware database system available for the TI. About the time I received V.2.0 of PRBASE, I received a flyer from Mark Beck of Jacksonville, AR concerning Creative Filing System also a Freeware program. Because it would do numeric calculations, I sent for it on behalf of the club. As with any program, one may suit your needs better than the other, but I believe Mr. Beck's program is worthy of your consideration if you need a good database. It is too bad these two gentlemen can't get together with the best parts of their programs to come up with one super database.

PRBASE 2.0 is reviewed elsewhere with notations by me of problems I encountered while using it. PRBASE is written entirely in Assembly, while most of Creative Filing is in Extended Basic. Thus, you will find it a little slower and a little less flexible, but very respectable and VERY easy to set up and use.

Before starting to use the program, initialize a disk with the name CFS_DATA. Then you are ready to use the CREATE function. You are allowed 16 fields of 14 characters each. However, 2 or more fields can be combined for 28 characters, 52, etc. But this will reduce the number of fields you have available. This database will handle numeric calculations both horizontally and vertically on the last 2 columns of a file. A demo program is included which shows how it is done, and it is quite impressive. Graphs can be made on this data also in the GRAPH option.

The DISPLAY function allows you to view an entire file, from record# to record #, any letter to any letter on a sorted field, or selected records.

The APPEND feature is where you add records to a file. Enter STOP at the first line of a record to leave this area and update your information.

SEARCH allows you to search an entire file on a single condition or multiple conditions. Logical operators are used when searching on multiple conditions...AND is both are to be met, OR if either is met, NOT for one condition and NOT the other. Sub files can be created on these searches

and almost unlimited variations of ways to print can be obtained.

CHANGE is the editing function and is one of the least convenient aspects of the program. However, before your data is saved in the APPEND section, you are given a chance to look over your data and make corrections at that time.

SORT up to 1000 records on 1 or 2 fields. (You would create a subfile in the SEARCH area and then SORT it here on the field you wished for your report) The only problem with this method is that you can soon fill up a disk or disks with SUBFILES of a database.

GRAPH displays totals (numeric data) of a file on a month-by-month basis. A demo program is included which shows how this is done. This program also supports Foundation's 128K card. The Utility program includes field repair, saving files in DV/80 format to TI-Writer, create a value file of names and addresses to be used with the mail-merge of TI-Writer, printing a file and transferring files from the 128K card to disk.

The REPORT program is VERY EASY. In contrast to PRBASE which took me a full 24 hours to get a sample database in and printed, I had a page full and printed out with this program in less than an hour. It also does professional-looking headings. And since it is written in Extended Basic, it only took a few minor changes to make it print the headings and page numbers at the top of each page.

Even though somewhat slower than PRBASE and not quite as sophisticated in its operation, this database has a lot going for it. I tested this with PRBASE with exactly the same setup and format. With PRBASE it was easier to input my information, make corrections, sort (Because the sort stayed in memory without creating another file. The actual sorting is about the same in either program.) However, CFS prints a nicer looking report and also handles numerical calculations. I did not try this as I was trying to compare ease of operations with PRBASE. However, the sample file included shows step by step what to do. The DOCS on this one are very clear and simple to understand.

You should give it consideration when looking for a flexible database. It is in our library or contact Mark Beck, 166 Belaware Circle, Jacksonville, AR 72076.

PERIPHERAL BOX COOLING
BY JIM NEKEEL, NORTHCOAST 99ERS

I can hear the comments now..."not another article about a quiet fan!" But with all the talk of modifying the unit to reduce the fan noise, it is important that we consider how the cooling is achieved in the PE box.

Let us think for a moment of the path that the cooling air takes in the PE box. Since the fan expels the air out of the box, that means that this is a negative pressure system. The outside air will be drawn into every hole, slot or other opening to make up the expelled air. The intended air flow for the card rack is for the air to enter the rear slots, pass over the cards, enter the front panel compartment through the front card slots, and then pass through the power supply compartment before being exhausted

by the fan. The path for the disk drive compartment is only through the drive door, exiting through the cable hole into the card rack compartment.

Some of the methods for reducing the fan noise has been to reduce the fan's speed or to install a new fan possibly with a lower airflow volume. Since this means that there would be less cooling in the PE box, it is possible that the cards and drive could overheat.

Suggestions by Martin Smoley are to: (1) improve the airflow around the cards installed in the rack by blocking the rear slots (using electrical tape) where there are empty card slots, (2) improve the airflow through the disk drive compartment by drilling a series of holes beneath the drive compartment and in the wall between the drive compartment and the card rack compartment.

Next month - MY solution to the noisy fan.

COMPUTER OWNERS VS. HOME COMPUTER MAGAZINE

BY ART BYERS - CALL SOUNDS - SEPT. 86

Led by Jeff Guide, of Disk Only Software, computer owners (many different brands) across the nation are banding together in a fraud complaint with the postal authorities in an attempt to bring the ripoff artists at Home Computer Magazine to justice.

Before going further, let's do a little bit of math. HCM's last advertised price was \$25.00 for 10 issues of the magazine and \$49.95 for 10 matching disks. Statistically, at any one time, the average number of magazines owed by a publication that has been on-going for some time, is 50% of a year's subscription. In this case, \$12.50 for magazines, \$25.00 for disks, or a total of \$37.50. However, not every subscriber ordered the disks, so we will take a more reasonable figure of \$25.00 total. Multiply this by 10,000 subscribers (a very conservative estimate) and you have \$250,000. That is what is involved in HCM's refusal to complete the subscriptions owed. To use a cliché - That ain't Hay!!! We are not counting the many people who subscribed to the new computer/audi music magazine and only got ONE issue. With this kind of money involved, the justification of the complaint is obvious.

In addition to the effort via postal authorities, the district attorney of Eugene Oregon has received sufficient complaints to enable the office to initiate an investigation of Emerald Valley Publishing and its owners.

Mr. Gary Kaplan, owner of HCM, for reasons unknown, has made an offer to some, but not all, of the HCM subscribers - that they received the expensive Home Computer Journal (\$25.00 an issue including a disk). Why fully half of the subscribers never got this offer is the unknown.

As a side point, let's look at the competitive market. At B Dalton Booksellers, there are several magazines on sale with program disks included. These are specialty magazines. That is, they are devoted solely to one computer such as IBM, Color Computer, etc. The IBM magazine, in full color, was priced at about \$18.00 and the Atari, also a slick magazine in color with disk, at about \$12.00. HCJ is a

one-color publication split among 5 computers. The price/value comparison is obvious. Mr. Kaplan is not even close to being competitively priced. Is this his way of ridding himself of a quarter million dollar obligation at minimal cost?

Among the basis of the complaint with the postal authorities is the large number of subscribers who requested refunds BEFORE and after HCM folded. None ever got so much as a postcard acknowledgement. Many of the requests were sent registered mail.

Those who did opt to receive HCJ, thought that if they were owed 4 issues of HCM, they would get 4 issues of HCJ - not true, their copy came with a form letter informing them that the one issue received was the last one they would get unless they subscribed to HCJ. Gary Kaplan can get away with this breach of contract because technically it is a different company making the offer!

Being a shifty runner has been Kaplan's style - selling one type of magazine, delivering another, erratic and unpredictable delivery, promising a special publication with all the advertising that was not in HCM and delivering that very seldom. Packing the magazine itself with advertising for his own products, including about 25% of the final issue as a pitch for a new magazine (as mentioned, he ripped off those foolish enough to subscribe).

OK, what action shall we take? If you were a subscriber and have not yet demanded a cash refund for the remainder of your subscription, do so now by certified mail, return receipt. When the receipt comes in, send a photocopy of your demand and receipt to Jeff Guide, Disk Only Software, P.O. Box 4170, Rockville, MD 20850. The more evidence Jeff can present to the postmaster, the more weight the complaint will carry. Kaplan expects to win by default - who is going to sue over \$25.00.

In addition, send a letter of complaint and a duplicate set of photocopies to: District Attorney, Consumer Relations, 400 Lane County Courthouse, Eugene, Oregon. (503/687-4261). As the movie said, let's let him know "We've had enough and aren't going to take it any more!". So please take action NOW!

BLOWING FAST DM-1000 V3.1

By Louis Guion

From News Net 99er, April/May, 1986

The newest version of DISK MANAGER 1000, (DM1000,V.3.1), suffers from the previously known defect of having any key which depressed and held for only a moment running away and repeating several times. You can fix it and set the repeat action as fast or slow as you want. You just have a single-sectoring program like DISKO or DISK+AID. Copy the file "Mgri" of DM1000 to a \$NEWLY \$INITIALIZED,

\$BLANKS diskette. You'll have only the one file, "MGR1" on the diskette.

Load, DISK+AID OR DISKO and either go to SECTOR >36 or have the program search for the HEX string of..... 06 03 16 F9 03 80 00 A0 FF 00 C0 1D. The important bytes are 0's >42 and >43 which are the ...00A0...in the string above. >00 A0 is 160, decimal. It can be written as 160d for simplicity. You want to change this 160d, or >00 A0 to another value to slow down the repeat key. The range of acceptable values will fall between 160d to 2000d or hex values >00A0 to >07D0.

THE FOLLOWING PROGRAM WILL CONVERT ANY BASIC PROGRAM WHICH IS TOO LONG TO RUN IN EXTENDED BASIC TO DO JUST THAT. THE COLOR CODES MAY COME OUT STRANGE IF YOU HAVE LOTS OF GRAPHICS, BUT IT WORKS!!!

1 !VDP UTILITY BY JOHN DEMME
E, CHICAGO, USA

2 !ENABLES YOU TO RUN A TI BASIC PROGRAM IN XB EVEN IF C HAR SETS 15 & 16 HAVE BEEN USED

3 !TO USE:1. SELECT XB. 2. IF REQUIRED, US CALL FILES(1) AND NEW. 3.LOAD TI BASIC PROGRAM, 4. MERGE THIS PROGRAM INTO IT.

4 ! ALL THE CALL LOADS TAKE A LITTLE WHILE TO WORK

5 ! THIS NEXT LINE IS VITAL:

6 CALL VDPUTIL2

8 ! TI BASIC PROGRAM FITS IN HERE:

32714 SUB VDPUTIL2

32715 CALL CLEAR :: CALL INT
T :: CALL LOAD(8194,63,232)

32716 CALL LOAD(16360,80,79,
75,69,82,32,38,12,80,79,75,6
9,86,32,37,164,80,69,75,86,3
2,37,36)

32717 CALL LOAD(9491,100)

32718 CALL LOAD(9508,2,224,3
7,20,3,0,0,0,2,0,0,100,200,0
37,18,4,192,2,1,0,1,4,3,2,3
2,12,4,32)

32719 CALL LOAD(9536,32,24,1
8,184,192,32,131,74,2,1,37,0
208,160,131,18,9,130,2,34,2
55,255,4,32,32,44)

32720 CALL LOAD(9562,4,197,2
09,34,36,255,9,132,19,21,4,1
95,60,224,37,18,200,5,131,76
200,5,131,78,200,5)

32721 CALL LOAD(9588,131,80,
2,5,64,0,161,68,2,131,0,1,17
6,2,5,65,0,161,67,6,196,200
4,131,76)

32722 CALL LOAD(9614,200,5,1
31,74,4,192,192,66,5,129,4,3
7,254)

32723 CALL LOAD(9636,2,224,3

7,20,3,0,0,0,4,192,2,1,0,1,2
00,1,37,18,4,32,32,12,4,32,3
2,24,18,184)

32724 CALL LOAD(9664,200,32,
131,74,37,0,184,32,131,18,37
19,2,3,0,2)

32725 CALL LOAD(9680,4,192,1
92,67,4,32,32,12,4,32,32,24,
18,184,216,224,131,75,37,0,5
131,136,3)

32726 CALL LOAD(9704,37,18,2
2,242,192,32,37,0,2,1,37,2,1
92,131,2,34,255,254,4,32,32,
36)

32727 CALL LOAD(9726,4,192,2
16,0,131,124,2,224,131,224,4
96,0,112)

32728 CALL LOAD(9740,3,0,0,0
4,192,2,1,0,1,4,32,32,12,20
6,32,131,74,37,18,2,1,0,2,4,
32,32,12,4,32)

32729 CALL LOAD(9770,32,24,1
8,184,192,32,131,74,208,32,3
7,19,4,32,32,48,4,91)

32730 CALL LOAD(8194,39,104)

32731 SUBEND

32732 SUBCHAR(A,A6):: L=LEN(

A6)

32733 A6=ASRPT6("0",16-L)

32734 FOR I=1 TO 16 STEP 2

32735 A16=SEGB(A6,I,1)

32736 A26=SEGB(A6,I+1,1)

32737 IF A16<" THEN A1=VAL
(A16)*16 ELSE A1=(ASC(A16)-5
5)+16

32738 IF A26<" THEN A1=A1+
VAL(A26)ELSE A1=A1+ASC(A26)-
55

32739 CALL LINK("POKEV",767+
88A+(I+1)/2,A1)

32740 NEXT I

32741 SUBEND

32742 SUB COLOR(A,B,C)

32743 CALL LINK("POKEV",2063
+A,(B-1)*16+C-1)

32744 SUBEND

32745 END

SUPER EXTENDED BASIC...WHAT IS IT?

By Dave Talan (Northcoast 99er's)

SXB or Super Extended Basic was introduced to the TI World in 1983. WOW..that long ago! The program was written by James B. Hollender, now out of the TI business. The purpose of SXB was to fill the gaps between extended basic, and the terrible monster: Assembly Language. The program filled the gap all right, with over some 100 TMS9900 subroutines which could expand your capabilities, and make life a little easier.

To make life even more easier, J and KH Software printed a monthly newsletter, to further provide programming tips, and new developments for SXB. SXBrief, the name of the newsletter, was supposed to SPREAD the news of how great the program was, apparently no one thought it was so great. Anyway, SXB did have some things worth mentioning. Like excellent Data Base, String Array, and VDP subroutines. Also, it did fill the so-called GAP between extended basic and assembly language, but it failed to meet the needs of 99ers at that time, where the search for software was so important.

SXB claimed to be the ULTIMATE programming tool for extended basic programmers. Through countless CALL LINK statements, SXB attempted to make life easier by SMXBN, that's the command to convert readable hexadecimal to

binary(2:1 ratio). Pretty useful HU!!! Especially for XB programmers. Gee, I use that almost every day. Here's another command, SANCOD. Yep you guessed it, that's the command to encode (encrypt) a string array according to your password.

WOW, that will come in handy for protecting my program. All I have to do is this one command and my programs protected. You're probably thinking "WHAT!" I think any DIM-WIT could get by that protection scheme...Just list the program! I'll just CALL LINK this, and I'll CALL LINK that and razza-na-tazz, here's my XB program. I think that was the authors idea of how SXB was supposed to work. I think that after reading the manual you would forget all but one command: CALL LINK! As to being "The Ultimate Programming Tool for Extended Basic Owners," that question is still up for debate. The fact of the matter was that SXB gave you the tools, but failed on how to tell you how to use them. Its like the father who told his 5 year old son..."Here's some pencil and paper, now write me a best seller." I just don't think it works that way.

Enough said. The point is that SXB was a program ahead of its time for the TI. When all other computers were developing programming languages(a good example is SIMON SEZ for the C-64) the TI was still in need of the most basic software!

For more details call Dave Talan at (216)/333-5829.

THE CARE AND FEEDING OF DISKS AND DISK DRIVES

By JMS listed below are a few facts and common sense items regarding disks and disk drives. Some you may have thought of yourself, some you may have learned the hard way, and some may be new to you.

A. If you don't have a disk in your drive, don't close the door or latch. This can cause the read heads (if double-sided drive) to possibly chip, which in turn could cause your favorite disk to be eaten (or scratched or destroyed). The same is true of single-sided drives. The felt pad that rests against the drive head can scratch the head leading to possible diskette damage. When not in use, leave the drive door open. However, if you are transporting the system, be sure to insert an old diskette or the original cardboard insert shipped with the drive and close the door. This will reduce the likelihood of damage to the heads.

B. Be careful when inserting the diskette into the drive. Be certain the disk is fully inserted. Attempting to close the door with the disk partially inserted can mash the disk, causing loss of data or errors in reading. Disketes with the hubrings can help center the disk properly as the door is closed. Never force the door closed. Something is wrong (you never had to force it before, did you?). Not only can forcing the door closed damage the diskette, it can also break the disk drive.

C. The quality of diskette is determined by many factors, but one of the most important is the size of the metal oxide chips on the diskette coating. The finer these chips, the greater sensitivity, the lower the "noise" level, and the smoother the surface (less head wear). Other important factors to consider are the binder material (the stuff that holds the metaloxide coating to the diskette), the quality of the lining material in the jacket, and the evenness of the lubricating coating (again, less head wear). High quality diskette does not necessarily mean high price. There are many mail order outlets selling quality diskettes for 50% or so less than name brand prices. However, avoid "cheap" diskettes. I won't mention any brand names, but if you don't know anything about disketes, ask others what they have used and which types have proven to be high quality, but still good buys.

D. Of course, you know that diskettes and magnets don't mix, but have you considered the many sources of magnetic fields that exist around your computer area? Some of the overlooked sources of magnetic fields include the telephone, calculators, the TV or monitor, even the vacuum cleaner (all high current motors have a strong magnetic field). Don't forget all the magnets (obvious and not so obvious), including those cute little magnetic memo holders, your "stick on" CB antenna, scissors, or any steel tools, screwdrivers, pliers, etc. (You'll be surprised how many of your hand tools have become magnetized.)

E. If you have been getting garbage or messed up data from time to time for no obvious reason, the culprit could be your monitor (or TV). Some units generate enough RF (radio frequency) interference to disrupt the disk drive logic or the data on the diskette. Does your monitor sit on top of your PEB? (Mine used to, but I moved it for a different reason - the PEB power supply transformer was messing up the color on my monitor.) Want to check for sources of RF interference? You probably have the test gear in your home - a small portable AM radio! Tune the radio to an empty part of the band (no station broadcasting) and run the radio around the computer and monitor. Listen for static and noise. Any place there is loud static or noise is a high source of RF. Take note of these locations and don't place or store your diskettes in these areas. (While you are exploring, place your little hand-held calculator next to the radio and perform some math routines. You'll "hear" the calculator thinking! These signals are too weak to harm your disks, so you don't need to worry.

F. Another source of garbage is misaligned disk drive heads. Trouble reading the data on a diskette used in more than one disk drive is a symptom of alignment problems. The data is read OK in one drive, but when moved to another drive, problems occur. You'll have to do additional checking to determine which drive has the problem. If you have a diskette that has a commercial program on it (any "store bought" program) use it to see which drive is not reading correctly. In all likelihood, that will be the drive with the alignment problem.

Most of what has been said can apply equally to cassette tapes. In either case, use good judgment and common sense and you'll have very few data problems.

```
[<><><><><><><><><><><>]
]      LOW-COST PRINTER FOR SALE!!!    [
[                                         ]
]          STAR STX-80 PRINTER           [
] This printer is compatible with all   [
[ existing software! It will turn your ]
] system into a PRINT SHOP!             [
[                                         ]
] >>> Printer w/software     $99.00 <<< [
[                                         ]
]      FOR MORE DETAILS CONTACT:         [
]              DAVE TALAN               [
]              (216)/333-5829            [
[<><><><><><><><><><><>]
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#####
      FOR SALE
#####
      GEMINI 10X WITH CABLE
#####
      $100.00
#####
      PHONE 256-1516 AFTER 5
#####
      OR ANYTIME ON WEEKENDS
#####
#####

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COMPUTER DICTIONARY ADDENDUM

Originally from HOCUS, the newsletter of the Milwaukee Area 99/4A User Group, via BAYOU BYTE, April, 1985, and SHOALS TIDINGS, JUNE, 1986

BIT: Describes computers as in "Our computer does quite a BIT."
BOOT: What your friends do to you when you brag about your computer.

BUG: What your eyes do after staring at the screen too long.

CHIPS: Used to insert into your DIP while working at your computer.

COPY: What you do at school after playing PARSEC all night.

CURSOR: What you become after your computer breaks down.

DISK: What slips in your back after hours of sitting at a computer.

DUMP: Where all your other hobbies go after buying a computer.

ERROR: Made when you walked into a computer store "just to look".

EXPANSION SYSTEM: The room you add to your house for your computer.

FLOPPY: The condition of a user's muscles after awhile.

HARDWARE: Rakes, mowers and other things not touched all summer.

MENU: What you'll never see because now you're too poor to go out.

PROGRAM: What you used to watch on TV before your computer was hooked to it.

RAM: What you do to your computer when it stops working.

RETURN: What you do to your computer when RAM doesn't work.

WINDOW: What you throw your computer through when you can't RETURN it.

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Name _____ Mail to: TI User Groups Newsletter
Address _____ C/o Frank Jenkins, 19809 Gladstone Rd, Cleveland, OH 44122
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